

Royal Institute of Navigation

UK Update since Navigation 2021

Andy Proctor, RIN Fellow and Trustee CGSIC September 2022

Agenda for presentation



- About the RIN
- RIN Strategy
- Navigation 21 Conference call to action
- Creation of a new RIN led advisory body for the UK

Royal Institute of Navigation

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- Our mission is to unite in one body those interested in navigation, and to advance the art, science and practice of navigation and to promote knowledge in navigation and its associated sciences, including positioning, timing, tracking and conduct of a journey, whether on, in, over or under land, sea, air or space
- Our vision is to be an inclusive group of diverse disciplines working together for a more navigable world



Membership

A global membership organisation

- ~1850 members
- members across 60 countries
- excellent loyalty and retention rates (top quartile)

Connected

Collaborating on the global stage

- Active member of International
 Association of Institutes of Navigation
- Host of European Navigation Conference in 2021
- Broad links including human cognition, health and animal navigation.





Insights

Linking Academia, Industry, Users

- Active links with >30 Universities
- Bringing science and technology together
- Over 100 speakers at RIN events in last 12 months

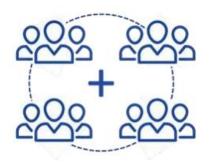
RIN Strategy

- Learned Society
 - Enable insights through bringing disciplines together for a more navigable world
- Growth and Development
 - Offer a supportive and straightforward approach to professional engineering registration
- Diverse and Inclusive
 - Offer an environment where everyone is welcome and can contribute and benefit



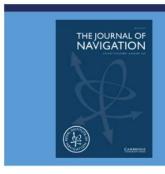






RIN Activities and 75 years





RIN's Journal

Journal of Navigation

- Open Access Transformative Journal
- 79 papers published in 2020
- High quality (24% acceptance rate)
- Impact Factor 1.9 (1.5 in 2018)

Events

Pivoted to Webinars from March 2020

- Over 51 webinars in 18 months
- Average registrations 100 (max 594)
- 7500 views on YouTube in last year

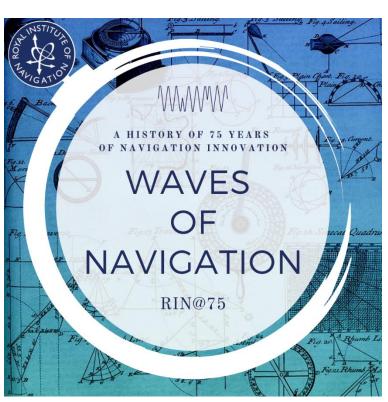




Communications

Active online and with social media

- Twitter 9,200 followers
- LinkedIN groups 2,600 followers
- Facebook 1830 likes
- YouTube 519 subscribers, new video approx. every 10 days



Navigation 21 Conference



- A joint hybrid conference in the UK in November 2021
 - RIN International Navigation Conference
 - European Navigation Conference
- Around 350 attendees (virtual and physical)
- More than just a one-way information flow, a real community developed through the event
- Guest speakers included HRH The Princess Royal
 - Who laid a challenge to positively impact society and build and transfer a new generation of skills

Navigation 21 [PNT] Outcomes



The PNT community is understanding threats in a more comprehensive way that before

Is PNT from LEO a service or an augmentation?

For CNI, systems thinking, in the form of PNT system resilience needs addressing

PNT can learn from AI/ML to address multipath in challenging environments

The PNT community can learn from animal navigation research to adopt simpler and more effective algorithms

Trust, but verify

There is a lack of UK consensus leadership in the PNT community

Government strategies reference but do not stimulate PNT innovation

Call to action: Need to have a body to represent all aspects of the PNT community

UK PNT Advisory Group



Goal to bring together individuals and organisations interested in Position Navigation and Timing (PNT) technology, policy, funding, collaboration, and research





Its scope covers all aspects of PNT from vision-based navigation to quantum sensing and space systems.

Taking input from all aspects of the PNT "world" in areas such as policy and strategy development, technology development, economics, standards development and regulation, resilience, and security, plus liaising with equivalent groups around the world.





It will build on the existing body of knowledge by addressing aspects such as use cases, depth of analysis and independent positions.



It aims to provide a neutral place for the "PNT sector" under the banner of a Learned Society and without bias or favour, to share knowledge and develop positions on key issues and opportunities, and to provide expert-led advice.



Initial Priorities



	Title	Overview
1	Economic Impact of Resilient PNT	A concept paper for a larger study
2	The role of Quantum sensing in PNT	Seminar or paper
3	The relationship between AI/Autonomy and PNT	Seminar or paper
4	Resilient PNT Standards for the UK	White Paper
5	The need for a National PNT test bed	White Paper/seminar

UK Launch



- Initial notices have been released
- RIN website updated
- Chair appointed and group executive committee formed
- Mailing list creation under way

Leadership event 1 November @ Royal Society



Thank you

Andy.proctor@rethinkpnt.com

On behalf of the Royal Institute of Navigation